

What is claimed is:

1. An electrically conducting ceramic bearing comprising TSC.
2. The electrically conducting ceramic bearing of claim 1, wherein the electrically conducting ceramic bearing comprises at least one electrically conducting rolling element comprising at least one of: a bearing ball, a roller, and a needle.
3. The electrically conducting ceramic bearing of claim 2, further comprising at least one of:
 - (a) a conductive coating on each electrically conducting rolling element; and
 - (b) a non-conductive coating on each electrically conducting rolling element.
4. An electrically conducting rolling element bearing assembly:
an electrically conducting inner race;
an electrically conducting outer race; and
a plurality of electrically conducting bearing rolling elements rotatably positioned between the electrically conducting inner race and the electrically conducting outer race,
wherein the electrically conducting inner race, the electrically conducting outer race and each electrically conducting bearing rolling element comprise TSC.
5. The electrically conducting rolling element bearing assembly of claim 4, wherein each electrically conducting bearing rolling element comprises at least one of: a bearing ball, a roller, and a needle.
6. The electrically conducting rolling element bearing assembly of claim 4, wherein each electrically conducting bearing rolling element further comprises at least one of:
 - (a) a conductive coating thereon; and

- (b) a non-conductive coating thereon.

7. An electrically conducting rolling element bearing assembly comprising:

an electrically conducting bearing rolling element support member comprising race means therein; and

a plurality of electrically conducting ceramic bearing rolling elements rotatably positioned within the race means of the electrically conducting bearing rolling element support member,

wherein the electrically conducting bearing rolling element support member and each electrically conducting ceramic bearing rolling element comprise TSC.

8. The electrically conducting rolling element bearing assembly of claim 7, wherein each electrically conducting ceramic bearing rolling element comprises at least one of: a bearing ball, a roller, and a needle.

9. The electrically conducting rolling element bearing assembly of claim 7, wherein each electrically conducting ceramic bearing rolling element further comprises at least one of:

- (a) a conductive coating thereon; and
- (b) a non-conductive coating thereon.

10. An x-ray tube for generating and directing x-rays toward a target along a focal spot alignment path, the x-ray tube comprising:

a cathode operatively positioned within the x-ray tube to generate electrons;

an anode assembly operatively positioned relative to the cathode to generate x-rays when struck by the electrons; and

a bearing assembly capable of supporting rotation of the anode assembly relative to the cathode,

wherein the bearing assembly comprises an electrically conducting ceramic bearing comprising TSC.

11. The x-ray tube of claim 10, wherein the electrically conducting ceramic bearing comprises electrically conducting ceramic bearing rolling elements comprising at least one of: a bearing ball, a roller, and a needle.

12. The x-ray tube of claim 11, wherein each electrically conducting bearing rolling element further comprises at least one of:

- (a) a conductive coating thereon; and
- (b) a non-conductive coating thereon.

13. An x-ray imaging system comprising:

an x-ray tube for generating and directing x-rays toward a target along a focal spot alignment path, the x-ray tube comprising;

a cathode operatively positioned within the x-ray tube to generate electrons;

an anode assembly operatively positioned relative to the cathode to generate x-rays when struck by the electrons; and

a bearing assembly capable of supporting rotation of the anode assembly relative to the cathode,

wherein the bearing assembly comprises an electrically conducting ceramic bearing comprising TSC.

14. The x-ray imaging system of claim 13, wherein the electrically conducting ceramic bearing comprises electrically conducting ceramic bearing rolling elements comprising at least one of: a bearing ball, a roller, and a needle.

15. The x-ray imaging system of claim 14, wherein each electrically conducting bearing rolling element further comprises at least one of:

- (a) a conductive coating thereon; and
- (b) a non-conductive coating thereon.